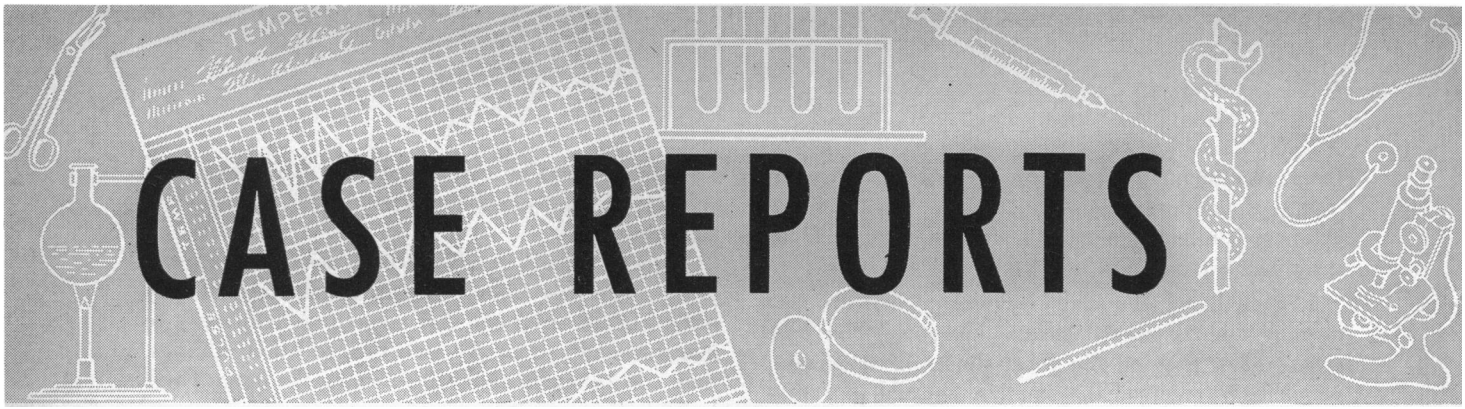

Multiple Myeloma

A Case Diagnosed Without X-ray Evidence of Bone Lesions

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MULTIPLE MYELOMA is a disease which has fascinated clinicians since 1845 when Dr. Henry Bence-Jones identified the protein in the urine of a patient referred to him by Sir James Watson. It is a disease which often escapes detection in its early stages because many clinicians consider roentgenographically observable changes in the bones a necessary criterion for the diagnosis.

Wallerstein[2] in 1951 brought attention to this subject with a comprehensive review of the literature and three case reports.

The following case is presented as one in which the diagnosis was made ten months before any lesions demonstrable by x-ray examination were present.

REPORT OF A CASE

The patient, a 50-year-old man, an oil company executive, was observed at home on September 6, 1950, for excruciating low backache radiating to the left buttock.

The patient had had low backache first in April, 1950. At that time a chiropractor made a series of "adjustments." Then the pain was worse. The patient stopped subjecting himself to the treatment and gradually the pain abated.

In the present illness he was unable to move or get out of bed. Morphine and meperidine were given, and the following day the patient was admitted to Community Hospital, Long Beach, where complete roentgen studies of the spine revealed no abnormalities. Orthopedic consultation was obtained and a diagnosis of low back sprain was made. The patient was discharged on the following day and received a series of physiotherapy treatments with improvement.

On September 29, 1950, he was readmitted to the hospital with excruciating backache. Large doses of meperidine were required for relief. X-ray studies of the lumbosacral spine were repeated and again no abnormality was observed. The only physical abnormality observed was paravertebral muscle spasm in the lumbar region. The straight leg raising test showed pronounced impairment on the left. Exercises for the lower back were prescribed and a back brace was applied. The patient improved and was discharged October 5, 1950.

The pain soon recurred and became excruciating, and on November 29, 1950 the patient was readmitted. Myelograms were done and were reported as showing no abnormality. The patient began to have pains in the ribs. Examination of a specimen of sternal marrow revealed 26 per cent immature plasma cells. The serum globulin content was elevated. The urine was negative for Bence-Jones protein. X-ray studies of the skull, thorax, complete spine, thighs, legs and pelvis were carried out and no abnormality was noted. Even so, the diagnosis of multiple myeloma was considered established. A series of x-ray treatments to the lower spine and pelvis was given. The patient had considerable improvement and returned to work.

On October 18, 1951, the patient fell from a ladder and fractured the right 6th rib. No evidence of osteolytic lesion was found at the site of the fracture. Adhesive tape was applied for immobilization and the patient returned to work two weeks later. However, he began to have pain again in the back and ribs and on December 20, 1951, another x-ray study of the bones was done. Pathologic fracture of the left 4th, 5th, 6th and 7th ribs was noted. There was compression of the bodies of the vertebrae from T4 to T11. Mottled bone absorption of the wing of the right ilium also was noted. Another series of x-ray treatments was given and the patient was discharged on January 4, 1952, and returned to work shortly thereafter wearing a back brace. He got along fairly well and codeine was used for control of pains.

In June, 1954, nausea, anorexia and anemia, as well as generalized severe bone pains began to develop. The patient was given urethane, as much as 1.2 gm. three times a day, but without much relief, and finally large doses of meperidine were required. Multiple transfusions were given. In August 1954 a spontaneous fracture of the left femur occurred and the patient then was bedridden until he died on September 18, 1954, four years and five months after the onset of the original symptoms.

In this case, suspicion of multiple myeloma was aroused when the skeletal pain of the patient seemed out of proportion to the conditions observed roentgenographically. Suspicion was further aroused

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when serum protein was found to be elevated. The diagnosis was then definitely established by bone marrow studies.

Medical literature contains very few reports of multiple myeloma diagnosed without lesions in the bones demonstrable by x-ray. However, since undoubtedly there are many cases in which the disease is present but radiographic appearance is normal, it should be emphasized that complete bone surveys should be done when there are other factors to arouse suspicion. It should be borne in mind also that there may be bone lesions far removed from the area in which the pain is localized, which may be demonstrated by proper x-ray studies.

Determination of the total serum protein may be used as a good screening test for myeloma in cases in which there is severe bone pain but either equivocal or normal roentgenographic appearance. Bayed and Heck[1] in a report on 83 cases at the Mayo Clinic noted that 73 per cent of the patients had elevated serum proteins. This was one of the most consistently positive of all the laboratory tests performed.

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Arachnodactyly with Associated Healed Dissecting Aneurysm

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ARACHNODACTYLY (Marfan's syndrome) is a rare hereditary disease characterized by multiple defects involving the mesodermal tissues of the body. Typically, persons who have the disease are tall and have unusually long extremities, especially the fingers and toes. A deficiency of subcutaneous fat and poor development of musculature causes an appearance of emaciation. Deformities of the spine, chest and feet are common. Bilateral dislocation of the lens of the eye and tremulousness of the iris occur in about half the cases. Glasses are frequently worn for correction of myopia.[6]

Serious lesions of the cardiovascular system have been responsible for the decreased longevity in the majority of cases of arachnodactyly coming to autopsy. Angina pectoris, dyspnea on exertion and orthopnea are frequent symptoms. Cardiac enlargement, aneurysm of the aorta and heart murmurs, especially the to-and-fro murmur of aortic insufficiency, are common clinical findings.

Including the nine cases tabulated by Thomas and co-workers[11] to 1952, the two cases of McKusick,[8] and single cases reported by Bigger,[1] Goyette and Palmer,[7] and Pygott,[10] and the present case, there is a total of 15 autopsied cases of arachnodactyly in association with dissecting aneurysm of the aorta reported in some detail in English literature. In 10 of these cases there was also aneurysmal dilatation of the aorta, usually the ascending portion. Two cases with intimal tears but without significant intramural dissection have also been reported.[9]

In the following case, the patient died with symptoms and signs of congestive heart failure, and an incidental "healed" dissecting aneurysm of the aorta was observed at autopsy.

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CASE REPORT

A white man 32 years of age entered the hospital August 21, 1954, complaining of shortness of breath and precordial pain of three months' duration. A month previously digitalis had been given by a physician. Three days before admission, anorexia, nausea and frequent vomiting developed.

At 13 years of age the patient had reached his maximum height of 6 feet 4 inches. Severe physical activity had frequently produced excessive fatigue for several days. He had always had a severe funnel chest deformity and wore glasses to correct myopia. He had been paraplegic for three years following compression fracture of the lumbar vertebrae in an auto accident.

Upon examination pronounced dyspnea was noted. The patient was asthenic and had long tapering digits. The blood pressure in the right arm was 100/40 mm. of mercury and in the left arm 120/50. Respirations were 30 per minute, the temperature 98.4° F. and body weight 170 pounds. Severe pectus excavatum deformity of the sternum was noted. The pupils were round, regular and equal. The apex impulse of the heart was visible as a diffuse thrust in the sixth interspace at the anterior axillary line. There was a systolic and diastolic (to-and-fro) murmur at the base of the heart, and a questionable diastolic murmur at the apex. Dullness to percussion over the base of the right lung and scattered moist rales were noted. The abdomen was soft with slight tenderness over the lower margin of the liver. There was paresis of the lower extremities and bilateral atrophy of thigh, leg and foot muscles and an absence of deep tendon reflexes. Reflexes in the upper extremities were weak.

The diagnosis upon admittance was rheumatic heart disease with aortic insufficiency and possible mitral stenosis. Therapy included rest in bed, a low sodium diet and a maintenance dose of 0.2 mg. digitoxin daily. An electrocardiogram showed sinus tachycardia with right axis deviation. The P-R